

REMARKS

Claims 1-5 are pending in this application.

Claims 1-3 and 5 are rejected under 35 U.S.C. §102 as being anticipated by Hollstein et al. (U.S. Patent No. 4,956,519) ("Hollstein"). Claims 2 and 4 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hollstein. These rejections are respectfully traversed.

Claim 1 recites a catalyst composition "consisting of mixed aluminum and zirconium oxides modified with tungsten oxyanion and a hydrogenation/dehydrogenation component of a Group VIII metal." By the language "consisting of" of claim 1, use of metals in sulfated form are excluded from the claimed scope of the invention. In contrast to the present invention, Hollstein's catalyst is in sulfated form.

The catalyst of the claimed invention is prepared by mixing zirconium oxide (Group IV oxide) with alumina (Group III oxide) and ammonium metatungstate $(\text{NH}_4)_6\text{H}_2\text{W}_{12}\text{O}_{40}\cdot x\text{H}_2\text{O}$, a Group VI compound). The mixture is extruded and impregnated with Pt (a Group VIII element) (see Examples 1 and 3).

According to col. 3, lines 20-30, the catalyst of Hollstein is prepared by co-precipitation of the following:

- (1) a Group III (e.g. aluminium) **or** Group IV (e.g. zirconium);
 - (2) a Group V (e.g. vanadium), Group VI (e.g. tungsten) **or** Group VII (e.g. manganese);
- and
- (3) Group VIII metals (e.g. iron and platinum).

Further catalyst mixtures mentioned in Hollstein are a Group VIII metal on a mixture of Group III and Group IV metal oxide/hydroxide, or on a mixture of a Group V, VI **and** Group VII metal oxide/hydroxide (col.3, lines 25-31).

A mixture of metals from Groups V, VI or VII metals can be used according to the description in col. 3, lines 3-7.

A preferred carrier useful in the catalyst of Hollstein (col. 3, lines 1 and 2) may be a mixture of aluminium and zirconium (Groups III and IV metals). The catalyst shown in the Examples of Hollstein consists of mixtures of Groups VIII and IV metals and Groups VIII, VII and IV metals.

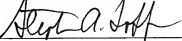
In contrast to the above possible metal combinations of Hollstein, the catalyst of the claimed invention consists of an oxide mixture of Groups III, IV **and** VI metal compounds impregnated with a Group VIII metal. No such combination is disclosed in Hollstein. A person skilled in the art of catalysis would not expect to achieve an active catalyst just by mixing a number of elements chosen from different Groups in the Periodic Table. Consequently, the claimed invention is non-obvious over Hollstein, even if this reference envisages all the metals *per se* being used in the present invention, however, combined in different mixtures.

With respect to the Examiner's comments regarding the standard of *KSR v. Teleflex* as being applicable in the present case, Applicants submit that as the reference (Hollstein) provides an exact teaching of a number of useful metal mixtures but not the specific mixture claimed in the present application, *KSR v. Teleflex* is not applicable to the present case.

Allowance of all pending claims is solicited.

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